

Determining the Burden and Causes of Foodborne Illness: Foodborne Diseases Active Surveillance Network (FoodNet), 1996-1997

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The burden of foodborne diseases is not precisely known; however, there are an estimated 6-33 million cases of foodborne diseases with as many as 9000 deaths in the United States each year. Although most of these infections cause mild illness, severe infections and serious complications do occur. The public health challenges of foodborne diseases are changing rapidly; in recent years, new and emerging foodborne pathogens have been described and changes in food production have led to new food safety concerns. The Foodborne Diseases Active Surveillance Network (FoodNet) is the foodborne disease component of Centers for Disease, Control and Prevention's (CDC) Emerging Infections Program (EIP). FoodNet is a collaborative effort among CDC, the United States Department of Agriculture, the Food and Drug Administration, and the seven EIP sites (MD, MN, NY, OR, and selected counties in CA, CT, and GA); the total population of these sites is 19.2 million persons or 7% of the US. The three goals of FoodNet are to determine the frequency and severity of foodborne diseases, determine the proportion of foodborne disease that results from eating specific foods, and describe the epidemiology of new and emerging bacterial, parasitic, and viral foodborne pathogens. The core of FoodNet is active surveillance for culture-confirmed cases of foodborne disease (*Salmonella*, *Shigella*, *Campylobacter*, *Escherichia coli* O157:H7, *Listeria*, *Yersinia*, *Vibrio*, *Cyclospora*, and *Cryptosporidium*). However, surveillance data may represent only a small fraction of the actual number of illnesses that occur in the population because many persons with diarrheal illness do not seek medical care, many physicians do not order stool cultures on ill patients and not all laboratories test for certain pathogens or report positive results. Therefore, FoodNet also conducts surveys to determine practices of the general population, physicians, and laboratories to enable extrapolation of surveillance data to better understand the true burden of foodborne illness. To determine the causes of foodborne disease, FoodNet has conducted case-control studies of sporadic *E. coli* O157:H7 and *Salmonella* serogroup B & D infections, and will begin a case-control study of sporadic *Campylobacter* infections in 1998. Finally, FoodNet is responding to emerging diseases such as *Cyclospora*, *Salmonella* Enteritidis phage type 4, and antibiotic resistant *Campylobacter* and *Salmonella* Typhimurium DT 104. In conclusion, FoodNet provides a network for monitoring the burden of foodborne diseases, identifying the source of specific foodborne disease, and responding to new and emerging foodborne diseases of national importance.

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